



(12) **United States Patent**
Sampica et al.

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(54) **SYSTEM AND METHOD FOR COMPLETING LAMINATION OF RIGID-TO-RIGID SUBSTRATES BY THE CONTROLLED APPLICATION OF PRESSURE**

(75) Inventors: **James D. Sampica**, Springville, IA (US); **Paul R. Nemeth**, Cedar Rapids, IA (US); **Tracy J. Barnidge**, Marion, IA (US); **Vincent P. Marzen**, Robins, IA (US)

(73) Assignee: **Rockwell Collins Inc.**, Cedar Rapids, IA (US)

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(58) **Field of Classification Search** **156/285, 156/286**

See application file for complete search history.

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Primary Examiner — Jeff Aftergut

(74) *Attorney, Agent, or Firm* — Donna P. Suchy; Daniel M. Barbieri

(57) **ABSTRACT**

The present invention is a process for performing rigid-to-rigid substrate lamination implementing pressure-sensitive adhesive (PSA). The process may include pressurizing a first sealed cavity to a first pressure. The process may further include creating a vacuum within a second sealed cavity, the second sealed cavity being sealed from the first sealed cavity by a flexible membrane. The process may further include applying the first pressure to a laminate assembly stack via the flexible membrane, the laminate assembly stack including a first substrate, a second substrate, and a PSA layer, the PSA layer being positioned between the first substrate and the second substrate. The process may further include applying the vacuum created within the second sealed cavity to the laminate assembly stack. The applied first pressure and the applied vacuum promote intimate contact between the first substrate and the second substrate of the laminate assembly stack via the PSA layer.

14 Claims, 12 Drawing Sheets

